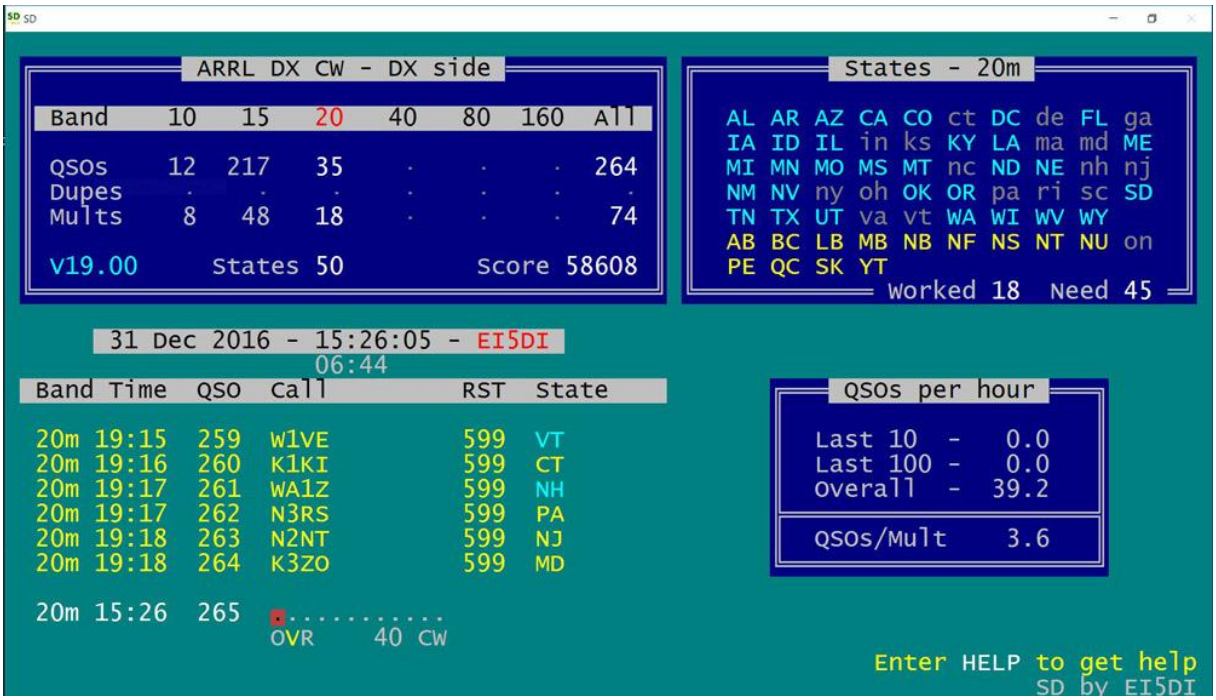
SD by EI5DI - Free HF Contest Logger

SD is fast, simple and effective. It is written for contesters, not for IT specialists. Its logs are standard text files, similar to Cabrillo. No binary files or proprietary databases are used, other than the Super Check Partial (.DTA) reference files.

SD is different. It combines the power of Windows with the efficiency and visibility of a character-based user interface – function takes precedence over appearance. SD supports CW and SSB operation in single-op unassisted entries. It does not support networking.

SD is comprehensive. It supports all the major HF international contests, the FOC Marathon, QSO Parties, and hundreds of other events worldwide – with over 300 templates supplied.



- Single keystrokes for all logging and editing functions.
- Real-time duping and prefix-checking, as you type callsign characters.
- Permits any combination of real-time or post-contest logging.
- Supports WinKey and rig control.
- Combines ASCII (plain text) logs with real-time editing of ***any*** QSO.
- Shows multiplier status and bearing/distance display, as prefixes are typed.
- Provides an audit trail of QSOs logged and edited.
- No clutter – windows are re-used as you type calls and log QSOs.

This manual has only 17 pages: Help stamp out bloatware – use SD.

* Please try all relevant options listed in the **Feature Summary** – Page 17.

Index - by Page:

Index - Alphabetic:

NOTICE

SD is easy to use, but it helps to know your way around Windows files and folders. In particular, you should be able to find, copy, rename, view, edit and delete text files. You should know how to attach files to emails, and to save files attached to incoming emails. Otherwise, you may be dependent on someone else to do this for you.

FILE EXTENSIONS in WINDOWS

Windows hides common extensions, by default. This can make it difficult to find and identify some files. After installation, look for the program file SD.EXE in your C:\SD folder. If the .EXE extension is not visible, you need to change a Windows parameter. For Windows 11, it's simple - select the View tab in Windows Explorer, then tick the "File name extensions" option. For older versions of Windows, try a Google search with the words **show file extensions**. This is a Windows issue, unrelated to SD.

INTRODUCTION

SD is a Windows program operating in text (console) mode, and is intended for single-operator unassisted entries. It runs perfectly on Linux, with wine and wineconsole - use the UNIX command (once only) to ensure a stable screen display on Linux.

While logging, SD displays all relevant information as you type callsign prefixes and log QSOs, with no need to touch any other key. In contests with multipliers, you get an instant multiplier summary below the callsign.

SD.INI, a configuration file, is created the first time you run SD, and is updated as you select options while logging.

INSTALLING SD

Installation is simple. With Windows 11, when you click the download link at ei5di.com, a small window appears with the heading "What do you want to do with sdsetup.exe?". Select "Run", if available, or "Save" (and then "Run" when sdsetup.exe has been downloaded). Ignore any Windows warning messages – SD will not harm your computer! Next, accept **all** the installation defaults – this also creates separate startup icons for SD and SDCHECK (post-contest options) on Windows desktop. When installing a new version of SD (not a first-time installation), the box "Create a desktop icon" should be unticked, as otherwise you may have to reset **all** the parameters as described below in "Getting Started"

Note: **Do not change the default folder** C:\SD without good reason – it is where **all** your program and reference files are held. When downloading updates, there is no need to remove previous versions of SD; your logs will not be affected.

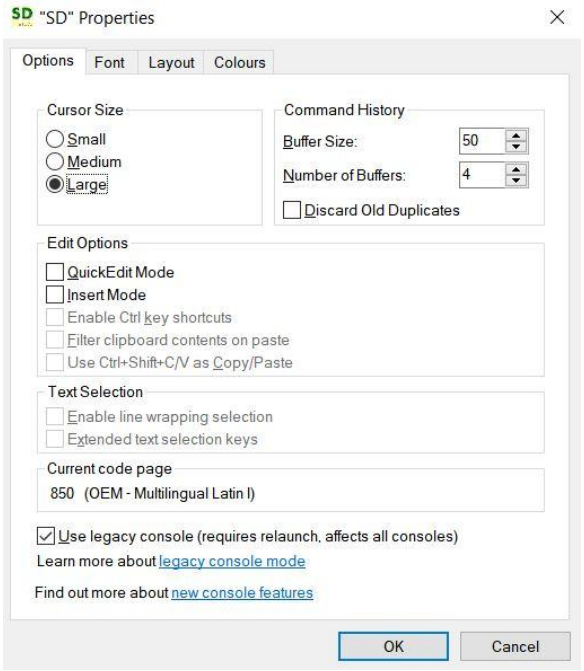
GETTING STARTED.

SD's window is character-based, and its dimensions are defined in terms of the number of rows (27) and the number of columns (82). SD's actual window size, on your screen, depends solely on the font size you select - larger fonts give a larger window.

After a first-time installation, the following Properties parameters must be applied for both SD and SDCHECK. Otherwise, the window will be too small and the display may be corrupt. If you accidentally select the "Create a desktop icon" option during subsequent downloads or updates, you may have to repeat this whole process.

To apply the parameters, right-click SD's desktop start-up icon and select Properties. The tabs of interest are Options, Layout and Font - in that sequence. If SD's default colours do not match those shown on Page 1 you may need to change some parameters in the Colour Tab. **Follow these Options and Layout examples exactly as shown.**

OPTIONS Tab:



IMPORTANT! Follow this sequence -

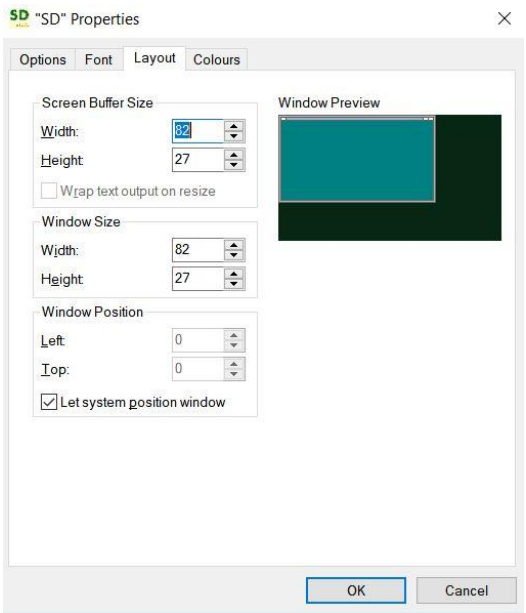
Use legacy console - Yes (selected)

Cursor Size - may be ignored
Command History - may be ignored

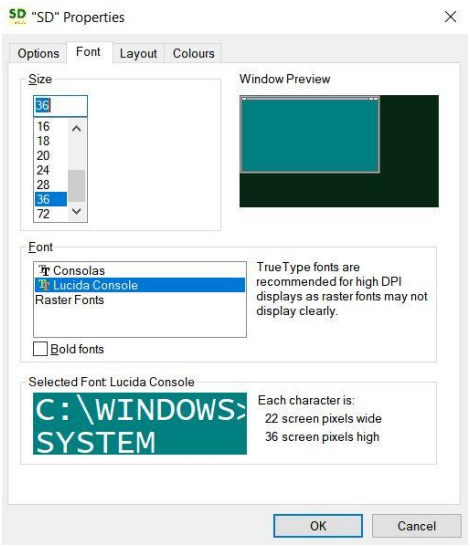
Edit options - All unselected

Text Selection - **all unselected**

LAYOUT Tab:



FONT Tab



DO NOT select the Raster Fonts option!
Widescreen monitors (16:9) - select **Lucida Console**
Older monitors (4:3) - try **Consolas**.

Note that you may see some alternative font options; **Courier New** is worth trying.

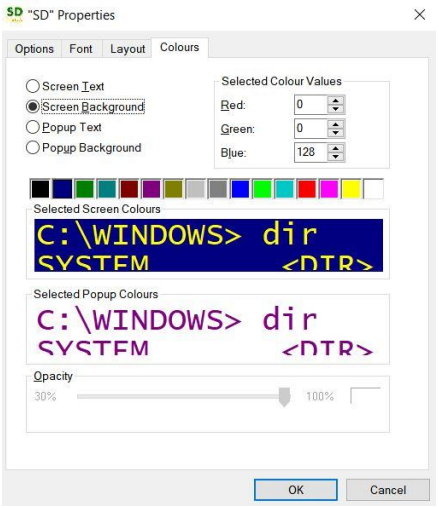
Bold fonts
No

Size
Select the largest font size that fits SD's window to your screen, or smaller if preferred.

With SD's expanded screen layout (refer to the EXPAND command on Page 10), the Properties Height parameter should be set to 36, not 27, and the Font Size should be reduced to make SD's window fit your screen.

COLOUR Tab

No changes are necessary if SD's colours seem "normal", and are similar to those in the picture on Page 1. Otherwise, select the "Screen Background" button.



Consider the buttons in the colour bar shown above to be numbered 1 to 16, from left to right. Select each in turn, and apply the recommended values for the corresponding Selected Colour Values".

Button	Red	Green	Blue
1	0	0	0
2	0	0	128
3	0	128	0
4	0	128	128
5	128	0	0
6	128	0	128
7	128	128	0
8	192	192	192
9	128	128	128
10	0	0	225
11	0	255	0
12	0	200	200
13	255	0	0
14	255	0	255
15	255	255	0
16	255	255	255

RUNNING SD.

When you start SD it expects you to provide a name for your contest log. Note – this is not the name of the contest itself. The name defaults to the one used the previous time SD ran. If you don't want to reload this earlier log, use Esc to clear the field. When you clear the name field, or enter "L", SD lists your previous contest logs in alphabetic sequence. "D", followed by Enter, lists them in date sequence, recent logs first. Use the arrow keys to select a log, then Enter to load it, or "Z" (short for Zap) to delete it. Page Down takes you to the next page of log names. Zap is handy for deleting test files you no longer need – but be careful not to delete ones you do need! Esc takes you back to SD's opening screen.

Your contest log names may be any combination of alphabetic and numeric characters, including internal spaces, up to a total of twenty-four. Other characters are ignored. When naming new logs, it's useful to include the year or date in their names, for example "CQWW CW 22". If you're just testing the various contest options, start your log names with TEST - that way you'll not mistake them for "live" logs.

When you enter a new log name, SD lists all the contests supported for you to choose one. Use the arrow keys, then Enter, to select a contest. Take care not to select the wrong option. Page Down takes you to further options.

When given the name of an existing contest file, SD re-loads and re-scores it, and takes you directly to the logging screen. The first time you run SD, enter your name and address – for storage in the initialisation file SD.INI. Parameters for the remaining fields are taken from whatever template you've chosen, and are shown for information only – they should not be changed. If you do need to change any field on this screen (in particular, the callsign used), answer "N" to the "Continue?" question. Otherwise, Enter takes you to the logging screen.

In mixed-mode events you'll be asked to choose your initial mode – this can be changed at any time while logging. The band is determined by your radio when rig control is enabled. Otherwise, it's whatever band you last used (stored as SD_BAND in SD.INI). The default is 80m when there is no entry in SD.INI. If you don't have rig control, use any appropriate band change command – try the HELP command or see the "Changing Band or Mode" section, or SD's Feature Summary on Page 17.

SD is optimised for real-time logging, although post-event logging is supported. To switch, use the commands REAL or POST (for real-time or post-contest). In post-contest mode, you're asked for the appropriate date – this **must** be entered as 8 characters in the format DD-MM-YY. To change the date for later QSOs, enter DATE in the time field.

The commands listed in the Feature Summary apply only to entries in the callsign field while logging. They don't work in the callsign field on the opening screen – the one showing your name and address.

UTC.

SD displays UTC, and the corresponding date, at all times – **assuming your computer is set to the correct local time and time zone** (with Windows Control Panel)

LOGGING QSOs.

For most contest QSOs, you record only the callsign and district code or serial (the exchange) received. When logging or editing serials, there's no need to include leading zeros - SD takes care of them for you. A received report of 59(9) is assumed, but can be easily changed. With effect from V21.50, the option to log anything other than 59(9) for RST Sent has been discontinued.

As you type callsign prefixes, the corresponding countries and zones are identified, and you know instantly whether the QSO will be a multiplier, or a double multiplier – with no need to press Enter, Space or any other key. When only certain countries can be worked for points, other-country callsigns and prefixes turn black as you type them.

Beam headings and distance are shown as you type callsign prefixes, except for own-country calls. Distances are in kilometres. If you prefer miles, change the SD_DISTUNIT record in SD.INI to M rather than K. **Reminder**: SD.INI is created only after you run SD for the first time.

SD takes your own latitude and longitude from your country record on the DXCC.CTY file, converts them to a six-character locator and stores it in SD.INI with the description SD_LCTR. You're free to edit your locator to increase the accuracy of SD's beam headings and distance calculations.

With SCP (Super Check Partial) enabled – SD's default setting – the callsign colour changes to yellow when there is a match with any full call displayed in the SCP window. This way, without moving your eyes from the callsign field, you can be confident that the call you're logging is valid.

While logging, press Enter (Return) after **every** field unless you want to delay logging the QSO. Following Enter, a QSO will be logged when all required exchange fields are present. Note that "present" is not necessarily the same as "correct". Tab lets you move between fields without logging the QSO.

To edit any earlier QSO, use Up-Arrow and then tab across to any field to be changed – followed by Enter to log the changes. If you log a QSO by mistake, use the ZAP command to delete it. This works only on the most recent QSO in your log - to delete earlier QSOs, add /ZAP or just /Z to the callsign. This marks the QSO for deletion, and it will disappear the next time you start SD. Note: the ZAP command may not work for all contests – test it first to avoid unpleasant surprises.

In contests with serials, Enter takes you directly to the Serial field after entering the callsign. Type 0 (zero) to record no serial – it will appear as blank, or spaces, in your final log. If you need to edit RST Received, press Enter in the **empty** Serial field to get back to the RST field. When you've edited the RST, a further Enter returns you to Serial. By pressing Enter, SD takes you to all QSO fields in the correct sequence – even for those rare occasions when you choose to edit RST Received.

To summarise, press Enter after each field, but use TAB or Right Arrow to move around the QSO fields without logging. The QSO will be logged following Enter, but only when all fields are valid.

In contests where you log serials and district codes, you have the option of entering both values in the "Serial" field. For example, enter 6AB to see 006 AB in their respective fields.

When logging, use quotes " to repeat the callsign from the previous QSO – for example, after moving a multiplier station to another band or mode, or working a "rover" on a county boundary.

As each QSO is logged, you'll see an analysis, by continent, of countries worked and needed on the current band and mode. Use F4 or F5, with Caps Lock Off, to see countries for other continents and bands. Minus restores the Summary Score at any time. **Tip**: Any time you get into trouble, Minus is a good option.

In contests where zones or other fixed district codes are logged, SD pre-fills the field based on what was logged previously, or on the default value (the zone) for the callsign. You are free to overtype whatever is received. If you enter a different code for a station already logged, all QSOs with that station will be updated accordingly, and mults flagged or unflagged as appropriate on all relevant QSOs on all bands, whether with that station or any other. No other contest logger does this.

If you prefer to do things the "hard" way, with no pre-fills, use the NOFILL command. The FILL command restores pre-fills, the default at startup.

OPERATING TIME.

Your cumulative operating time is shown under the date and time bar. Time starts when the first QSO is logged. Gaps between QSOs of 60 minutes or longer are ignored. Following such gaps, timings starts again from the next QSO logged.

Seconds are ignored in calculating operating time. A QSO logged at 12:00:59 is considered to have been logged at 12:00:00.

The SHOWTIME command toggles the display of operating time. The display reverts to On each time SD is started.

CHANGING BAND AND MODE.

Without rig control, the simplest way to change band is to enter an appropriate frequency (integral kHz) directly. In general, your rig will go to the last used frequency on that band. Note that the frequency logged, and shown in Cabrillo logs, will be the lower band edge frequency.

SD links to most radios to synchronise band and mode, and to keep you logging on the correct band and mode. F11 and F12 change bands corresponding to the band sequence (left or right) in the Score window. In this context, there is no "up" or "down", as it depends on whether you think of bands in term or metres or frequency – "up" for one is "down" for the other. If you prefer, Alt-F1 and Alt-F2 change bands in the same way.

F11 and F12 work this way only when all QSO fields, apart from RST, are empty. Otherwise, their alternative functions are unchanged. F11 deletes (wipes) an unlogged QSO without updating the Band Map. F12 silently logs a QSO when ESM (Enter Sends Message) is enabled – in contrast to Enter which also plays the corresponding ESM message

In mixed-mode events, use the **C (**CW**)** or **S** (SSB) commands to change mode.

With rig control, you can QSY by entering the frequency in the callsign field. The appropriate mode is automatically selected (CW, LSB, USB). Your original "run" frequency is stored in the Band Map and you can restore it by pressing F10 twice. This is useful for returning to your run frequency after moving a multiplier.

If you prefer, you can move directly to any band – the B40 command takes you to 40m, B20 to 20m etc. These command work with or without rig control.

To reverse the sideband, on either SSB or CW, use the **X** (eXchange) command. Why should anyone worry about reverse sideband on CW? There are two reasons. The first is to reduce QRM (this may not always work), and the second is for consistency with regard to whether you're tuning up or down the band. On CW, I prefer to tune towards zero beat, not away from it.

COMMS PARAMETERS.

Use the PORTS command to define ports for rig control and/or keying. Separate ports are required for each - they may not be shared.

CW Port – internal or WinKey.

0	Disables CW.
1 – 48	Assigns COM1 – COM48
	Printer (parallel) ports are not supported

Rig Control Port

0	Disables rig control
1 – 48	Assigns COM1 – COM48
	Printer (parallel) ports are not supported

Model

Enter (leave blank) to list supported rigs.
Enter NONE to clear the previous model.

If you enter a COM port number and get the message "No COMx on this computer", it means that SD cannot see that port number - it may be held by another program. You can verify your computer's port numbers using Windows Device Manager - select Ports (COM & LPT).

When rig-control is active, SD, by default, asserts DTR and RTS on the corresponding port, and either of these may be used to power external level converters for rig control. The SETUP or CONFIG commands let you toggle DTR and/or RTS.

RIG CONTROL

The following default rig-control parameters apply the first time you run SD. They are held in SD.INI and stay in effect until you change them.

Bits per second:	4800
Data bits:	8
Stop bits:	2
Parity:	N (None)

Use the PORT command to edit your rig-control parameters. Remember that your rig must be set up to match all of them. **Use the highest BPS value your rig supports**. Again, the STATUS command displays your settings.

For Icom rigs, CI-V USB "Echo Back" must be enabled in the rig's menu settings.

The LINK command toggles rig-control On and Off - this can be useful when you need to temporarily break the link.

With rig control enabled, your frequency (to 10Hz) is held in each QSO record, and in Cabrillo or ADIF logs (1 kHz) created by SDCHECK.

CW KEYING & WinKey.

CW keying defaults to SD's internal keyer. With an external WinKey or microHAM keyer, use the PORTS command to enable WinKey. The PORTS command is also needed to use SD's internal keying - corresponding to WINKEY=0 in your SD.INI file.

WinKey (www.hamcrafters.com) **is recommended**, because it guarantees smooth CW from all PCs, and connects to the PC with a standard USB Cable. WinKey lets you change speed with a pot, even while sending a message, and is fully integrated with the paddles – just touch either paddle to interrupt WinKey, and then continue manually at the same speed. The output of WinKey connects directly to your rig, no level converter of any kind is required.

The Flex 6000 series rigs support WinKey emulation - open SmartSDR CAT, create a new port with Winkeyer as the Port Protocol and save your settings.

microHAM Notice: For microHAM units with an internal WinKey chip, use microHAM's USB Device Router software to create a virtual USB port (any number of your choice, for example COM9). Then use SD's PORTS command to assign that port for keying. Note that the microHAM device router software ignores WinKey control commands issued by SD - you must select your parameters with miroHAM's device router.

The POT or SPEED commands let you choose between control of WinKey's speed with its internal pot (P), or with the keyboard (K). The default is P – corresponding to SD_WKPOT=1 in SD.INI.

Internal keying and PTT are supported via serial ports only. If you already have a lead which works with other contest loggers, it is likely to work with SD. Note that PTT is a CW feature and is unrelated to rig-control, regardless of whether a PTT connection is made to the rig. SD's PTT control is an alternative to any integrated PTT function on your rig - you may not need it. The STATUS command displays your keying and rig-control ports configuration.

Serial Keying: (for internal keying only - not applicable to WinKey). You'll need any general-purpose small signal NPN transistor, such as 2N2222, BC182A or BC317, and a 2k resistor. They should fit inside the cover of your 9 or 25-pin D connector to the computer. Data Terminal Ready (DTR) is pin 20 on a 25-pin connector, or pin 4 on a 9-pin connector. Signal Ground is pin 7 on a 25-pin connector, or pin 5 on a 9-pin connector.

Signal ground connects to ground on the transmitter key input. The 2k resistor goes between the base of the transistor and DTR. The emitter goes directly to signal ground, and the collector goes to the positive side of the transmitter key input. A PTT signal is available from RTS. That's pin 4 on a 25-pin connector, and pin 7 on a 9-pin connector.

Parallel Port Keying is not supported:

SD's internal keying works perfectly well most of the time, but you can't always depend on it because of Windows background activities on individual PCs. WinKey is preferred, as it eliminates the possibility of CW timing errors caused by Windows.

On some computers, when you start your computer with a serial cable connected, DTR may be set to ON which will key your rig. Once you use the keyer from within SD, DTR will be set to OFF.

KEYBOARD MODE (CW).

Use the Ctrl key to switch to keyboard mode (from logging mode – assuming a CW port has been enabled. Esc, Minus or Enter returns to logging mode. You must be in keyboard mode to change the keying weight, Right-Arrow to increase it, Left-Arrow to reduce it, and Home to restore it to 50%.

Page Up and Page Down change your CW speed at any time. With WinKey, by default, the speed pot controls your speed.

SD provides eight CW memories, for replay with F1 to F8 (Caps Lock must be On). Note that Caps Lock must be OFF to get the standard F1 to F8 functions. You'll know Caps Lock is ON when the symbol ^ is visible to the left of the Callsign field. Esc instantly stops playback of any CW memory. With WinKey, you have the option of touching either paddle to do the same.

The numeric keypad (with Num Lock OFF) gives another memory playback option.. It has the advantage of giving continuous access to the keyer *and* all the function key options.

With internal keying, SD performs an automatic CW speed calibration each time it starts. If the speed seems to be incorrect, use the CALIBRATE command to reset it. Calibration takes place only when your selected keyer port is non-zero. WinKey does not need to be calibrated.

The T(UNE) command enables continuous keying as soon as you press Enter. Once you've started tuning, you can toggle it On and Off using only the Enter key. Use Esc or Minus to clear the callsign field when you've finished.

CW & WinKey COMMANDS (In the Callsign field)

CAL(IBRATE)	Calibrates internal keyer – not WinKey.
PORTS	Configure CW & rig-control ports.
CQTIMER / CQT	Sets CQ interval in seconds : 0=Off.
CWSTART / START	Select start character for F2 auto playback.
CWZERO	Select CW zero - Ø, T or O.
PTTON	Enables PTT.
PTTOFF	Disables PTT.
PTTLEAD	Set PTT lead delay, 0 – 250 ms.
PTTTAIL	Set WinKey PTT lead delay, 0 – 250 ms.
SIDETONE	Toggles WinKey's Sidetone – not for WK1.
SWAP	WinKey – reverses paddles.
TUNE	CW key down.
POT or **SPEED**	Control speed with the Pot or the Keyboard.
WKCOMP	Adds a fixed amount to all dots & dashes.
WKEXTN	Adds a fixed amount to the first dot or dash.
AUTOSPACE	WinKey – toggles AutoSpace support
MINWPM	WinKey – sets minimum WPM.
WPMRANGE	WinKey – sets WPM range.
Esc	Stops memory playback.

ESM – ENTER SENDS MESSAGE – CW.

To use ESM, you must have configured a CW port using the SETUP or CONFIG commands. Hint: your WPM is shown only when a CW port has been enabled.

ESM lets you log CW QSOs, and send the "correct" CW messages at all times without the need to "play" function key memories. Alt-M, or the Apostrophe key, toggles ESM On or Off.

ESM has two modes, RUN and S&P. In RUN mode, other stations are calling you. In S&P mode, you're calling other stations. You just have to be aware of which mode you're in (not too difficult), and toggle the mode as necessary. To toggle between RUN and S&P modes, use the Grave Accent key (above the Tab key). Alternative options are Alt-R or Alt-S. Shift_Enter is another option for toggling ESM modes, with the addition of sending the corresponding message immediately - F1 for RUN and F5 for S&P. You should experiment to find your preferred options.

Note that, in RUN mode, ESM does **not** work as intended when the exchange is pre-filled by SD. Your options are then to disable ESM, or disable pre-fill with the NOFILL command.

At all times SD displays your ESM mode, together with the message it will send after the next Enter.

ESM - RUN mode:

Enter in an empty Callsign field plays your F1 message, (TEST or CQ). To repeat your CQ (F1) message at fixed intervals, use the CQTIMER or CQT command. This sets the CQ interval in seconds. Auto-repeat works only in RUN mode, and stops with Esc or when anything is typed in the callsign field. A value of zero disables repeats.

Enter, after a callsign (minimum 3 characters) plays your F2 message (callsign + exchange). Your F2 message should end with the #E (Enter) parameter. Callsign type-ahead is supported. For example, W3L Enter PL sends W3LPL followed by the exchange. Note: Callsign type-ahead also works without ESM.

To leave the callsign field without playing a memory, use TAB.

With ESM enabled, a duplicate callsign followed by Enter plays the F4 message. If you're happy to log dupes, make your F4 message the same as your F2 message - using Shift_F4. Otherwise, set F4 to your dupe message (with #E as the last parameter).

When the QSO is logged, F3 (TU MyCall) plays – but only if you previously used Enter (not Tab) to leave the Callsign

field. If you change a callsign before logging the QSO, the new callsign is added to your F3 message to confirm the correction to the other station.

If you want to log a qso (while ESM is enabled), but not play the keyer, use F12 instead of Enter.

With ESM enabled, you have the option of starting the F2 (exchange) message automatically after a given number of callsign characters – you then complete the callsign while the exchange is being sent. Use CWSTART (or START) to select the starting character – 4 is a good initial option. The status line, under the callsign, then shows RUX instead of RUN – where X represents your chosen starting character.

ESM - S&P mode:

Enter, in the callsign field, plays F5 (MyCall) and, if a callsign is present, takes you to next field – Serial or District.

If the next (exchange) field is empty, Enter again sends MyCall, otherwise it send the exchange (F6) and logs the QSO.

When SD identifies district codes from the callsign, or from previous QSOs, it auto-fills the data in the exchange field. This can be a nuisance in S&P mode – you must then use F5 to repeat your own call

Esc stops the keyer instantly.

If you run into problems, simply disable ESM with Apostrophe. Once again, F12 lets you log a QSO (assuming all fields are valid) without playing the "normal" ESM message.

When using SD's internal keyer, apostrophe does not work during message playback.

Shift+Enter, while in S&P mode, toggles to RUN mode and sends your CQ message – handy when you find an unused frequency.

CW MEMORIES - INITIAL CONTENTS.

1	TEST OwnCall OwnCall TEST (Where OwnCall is from the opening screen)
2	Call Logged, Exchange, Enter
3	TU OwnCall Enter
4	Call Logged, Exchange, Enter (Dupe message)
5	OwnCall
6	TU RST, Serial
7	RST Previous Serial
8	?

The following parameters may be embedded in any preset memory message.

#R	Own callsign.
#C	Current or most recent callsign logged.
#S	Current serial (or other exchange data)
#T	RST Sent - Default 5NN
#P	Previous serial
#N	Name (after callsign match with LOAD)
#E	Simulates the Enter key.
#B	Simulates the Space Bar.
<	Increase speed by 2 wpm
>	Reduce speed by 2 wpm
^ or **~**	One-half dot space.

For example, `#C #T #S#E` would send callsign + full exchange followed by Enter - all with a single keystroke.

When you get a callsign match after LOADing a Call History (.LST) file (see Page 13) such as FOC or CWOPS, the **#N** parameter will send the other op's name. If there is no match, nothing is sent. When editing keyer memories, with Shift-F1 etc, do not insert a space in front of #N - the space is assumed on a callsign match.

In contests with serials, leading zeros are sent as "T" and other zeros are sent in full. CWZERO allows you to choose abbreviations for non-leading zeros, the number 1, and the number 9. Also, you may choose to omit leading zeros, or add extra spacing (serial padding factor) to variable exchange items such as serials, making them easier to copy.

Use the < parameter to temporarily increase speed by 2 WPM, and > to reduce speed by 2 WPM. Use a minus for speed reductions. For example, <<< gives a temporary speed increase of 6 wpm.

If your normal speed is 32 wpm, then the message

`<<<<TEST>>>> EI5^DI EI5^DI <<<<<<<<TEST`

sends

`TEST`	at 40 wpm
`EI5^DI EI5^DI`	at 32 wpm
`TEST`	at 48 wpm

Normal speed is reset at the end of each message – there's no need to add a parameter to do this.

Another example - with normal speed of 25 wpm:

`#C <<<<<<#T >>>>>>>>#S#E` sends

Callsign (#C) + 1 space at 25 wpm
5NN (#T) + 1 space at 37 wpm
Serial (#S) at 21 wpm
Enter (#E) - automatic move to next field to be logged.

The ^ or ~ characters represent a half-dot space. They may be strung together to give better readability with some callsigns. Try G3RTE and G3R^^T^^^E to hear the difference for yourself. I use EI5^DI for my own callsign – it's subtle but effective, and makes it more readable. If your callsign doesn't need any "tailoring", simply use the #R parameter in keyer messages to represent your callsign.

SD does not, by default, load the correct exchanges in all CW contests. It's essential to check them all before each contest, and edit them as appropriate.

To edit keyer messages, use Shift-F1/F2 etc. This will display the current message and invite you to enter a new one. Use Enter to save the updated message. If you don't change anything, or if you use Esc while editing, the original message will be unchanged.

If you get into trouble, whether in keyboard mode or when sending a preset message, Esc stops message playback instantly. On the numeric keypad, **+** works like Esc to stop memory playback.

Use Tab to leave the callsign field without playing a memory. When the QSO is logged, F3 plays, but only if you previously used Enter (not Tab) to leave the Callsign field.

If you would like to experiment with disabling dot/dash memory in WinKey (when doing the keying yourself), try the MEMORY command. The default is enabled/on. When enabled, you'll probably make fewer mistakes on the paddle(s), as timing is less critical.

When using SD's internal keyer, I'd recommend you connect it in parallel with whatever alternative keying method you have. If you make a mistake in entering a call, it's often quicker to send it on your normal key or paddle and then correct the computer entry later.

In contests with serials, if you've already logged a QSO and need to repeat the exchange, F2 sends the correct callsign and serial - but only when the current callsign (on the logging line) is blank.

HELP.

The HELP (or H) command displays a summary of all SD's commands and edit functions, as held in the HELP.TXT file.

SERIALS SENT.

SD displays the current serial on the logging line, regardless of whether you have typed any data in any logging field.

In CW contests, you may need to repeat the previous exchange, including Serial Sent, after logging a QSO. The safest option is to first clear the logging line with Minus or F11 before repeating the exchange with F2. If, in these circumstances, the logging line is not clear, there's a risk of sending the wrong serial (an out-by-one).

To reset your Serial Sent to any arbitrary value, use the SERIAL command.

To make things more interesting, try the RANDOM command. It works in any contest with serials to let you select 3 or 4-digit random (but repeatable) serials – with no leading zeros. Some day, all contest loggers will include this option.

EDITING FIELDS - Call, RST, Serial, Locator.

SD offers versatile editing functions. They're efficient, but may differ slightly from other loggers, and it's worthwhile taking time to get used to them. Many, but not all, of the "standard" multiple keystrokes are supported – so please experiment before the contest.

Esc Clears any single field - a second Esc restores it.

Minus Wipes the current QSO Entry, or abandons an Edit and returns to QSO Entry mode. (Think of Minus as "take away" - it's useful if you get into trouble during an edit or if making corrections to a new QSO takes too long - it lets you start again from the beginning). ESM is initialised, and the Band Map is updated (call and frequency is stored).

F11 As Minus, but the Band Map is not updated.

Home or **[** Moves to the start of a field.

End or **]** Moves to the end of a field.

Delete Deletes the character above the cursor.

Backspace Deletes the character to the left of the cursor.

Use the **arrow keys** to move right and left within fields, or to move from one field to the next (Right-Arrow only). Up Arrow, in an empty Callsign field, lets you edit previous QSOs. Up Arrow, when there is one or more characters in the Callsign field, retrieves partial calls – and is very useful when there is a single call in the Check Partial window, as Up Arrow instantly transfers that call to the Callsign field.

DATA ENTRY MODES.

The entry mode options are **Overwrite** and **Insert**. Unlike other contest loggers, the default is overwrite, as shown by OVR under the Callsign field. You can toggle to insert mode, if you prefer, by pressing the Insert key.

In Overwrite mode, anything you type replaces what's under the cursor. In Insert mode, whatever you type is inserted (added) before the cursor.

Insert mode can be useful when you have missed the prefix in a callsign and need to complete it after recording the remaining QSO information. In this mode, when you return to the Callsign field, press Home or [to move the cursor to the first character, ready to insert the prefix.

If you're in OVR mode, and need to insert callsign characters, place the cursor as necessary and press the space bar to create a few spaces. You can then type the missing characters. It's usually faster to do this than to switch to Insert. Don't worry about leaving extra spaces in the callsign – they disappear when you leave the field.

AUTOINSERT (or **AI**) is a powerful data-entry option exclusive to SD. It toggles SD's auto-insert feature for Callsign entry in the callsign field on the logging line. It applies only when you have not selected INS (Insert) as your default date-entry mode.

With Auto Insert On (this is the default with effect from V16), the "V" in OVR is highlighted. Then, any time you move to the start of callsign field, SD switches temporarily to Insert, so that you can enter prefix characters directly. When you use any other character to change the position of the cursor, the mode reverts to OVR.

DEALING WITH DUPES.

SD gives auto-prefix checking once you've typed two or more callsign characters. This lets you know about potential and actual dupes without having to type the full callsign.

If a callsign is a dupe, its colour changes to black, with the word Dupe above it. You can delete the callsign with Esc, Minus or F11. If you have moved to another field, Minus or F11 will wipe the QSO. Enter, in an empty Serial or District Code field, will wipe a dupe.

To log the QSO as a dupe, type (or accept) the exchange followed by Enter.

The BEEP command toggles audible indications of potential dupes – with playback of DUPE.WAV (supplied).

When a dupe is flagged, F9 shows the full QSO details.

<**Soapbox**> When the caller is a dupe, it's quicker to send your normal exchange and log the QSO. **There is no penalty for dupes.** Cabrillo QSO records contain no scoring information whatsoever – whether points, mults or dupes. Now that Cabrillo is universal, contest organisers independently score and dupe-check each log – the concept of "unmarked dupes" has gone forever. <**/Soapbox**>

For duping purposes, SD tests for calls of the type W6AA, W6AA/9, KP2/W6AA, W6AA/KP2, and ignores the following suffixes.

/P /M /A /MM /AM /QRP

For example, if GI3OTV/M has already been logged, GI3OTV will be flagged as a dupe on the same band. This applies both to new QSOs and to edits of earlier QSOs.

The SETDUPE command resets dupe checking at any time – it's intended for contests that are divided into separate time periods> It lets you log, and score, the same stations in each period. SETDUPE optionally resets multiplier checking. You should not edit any QSO logged before the time of the most recent SETDUPE command – otherwise dupe checking may fail.

SEARCH AND POUNCE.

SD offers fast, simple and powerful options for searching and pouncing.

When searching, the Check Partial window shows potential dupes once you've typed two or three characters of the callsign. It displays a list, in alphabetic order, of all stations already worked, on any band, which include those characters. Callsigns shown in bold, and in upper case, are needed on this band. If blue, they represent multipliers. Those shown in lower case are dupes. If the call would be a dupe, use Esc to clear it – ready for the next callsign or prefix. If the callsign isn't shown in the Check Partial window, or no callsign appears, then it hasn't been logged any band and you free to call.

The default display option for Check Partial (and Super Check Partial) is to replace the Score Window. Use the EXPAND command to increase the size of SD's desktop, and enable Check Partial display underneath the logging line. This option is worth trying, especially when with SCP enabled, simply because the information you need is close to the Callsign field. When you do this, you must set SD's Properties Height field to 36, and reduce the Font Size (also in Properties) to ensure SD's window fits your screen, .

You can quickly retrieve any needed callsign from the partial call window – sometimes this is faster than typing it in full. Use Up Arrow to go to the window (this works also for SD's expanded screen layout), then any Arrow keys to move around the window. Only non-dupe calls may be selected. Press Enter to retrieve a selected call and place it on the logging line.

As mentioned earlier, when there is only one needed callsign in the Check Partial or SCP window, Up or Down Arrow (on its own) instantly retrieves the call. This is neat – please try it!

Auto-suffix check: Full Stop (period) lists all stations worked with any given suffix. You should then use Comma to revert to standard Check Partial – for advance warning of dupes.

In the IOTA contest, type any IOTA reference in the callsign field to get a corresponding band/mode multiplier analysis. Clear the reference with Esc or Minus.

DXPEDITIONS and SPECIAL EVENTS.

For logging on all 10 bands from 6 to 160 meters. Select the DXpedition Logging or Special Events template.

SUPER CHECK PARTIAL (SCP)

SD uses standard MASTER.DTA callsign databases as references for super check partial with two or more callsign characters.

Use equals "=" or the SCP command to toggle SCP ON or OFF. With SCP enabled, comma toggles the display between "Prefix Only" and "All", and full stop (period) switches the display to "Suffix Only".

SD uses custom SCP databases for some events, including the FOC Marathon and CWops contests - these are supplied with SD. This feature is controlled by the SCP-FILE parameter in the corresponding TPL (template) files.

Up-to-date SCP files may be downloaded from www.supercheckpartial.com

KEYBOARD ASCII CHARACTER MAPPING.

SD can be used with **all** keyboards – not just UK and USA. SD.MAP, a character-mapping file, lets you convert any character to any other. In the absence of SD.MAP, no character conversion takes place. You can map "standard" characters, including numbers and letters, but not function keys or cursor control keys. SD.MAP files are supplied for French, Belgian and German keyboards. They give access to the number keys without the need for Caps Lock, so that users retain the option of single-key playback for the F1 – F8 keyer messages.

If your keyboard does not display all the top-row numbers correctly (with Caps Lock off), try the FORCENUM command - it guarantees numbers at all times, regardless of the status of Shift and Caps Lock. FORCENUM is also appropriate for non-UK/US keyboards (such as French) where Caps Lock must normally be enabled to access the top-row numbers.

Whatever keyboard you're using, even UK/US, should you find that SD will not accept some characters, or displays incorrect ones, use the SHOW command to show what SD "sees" for each character, and its 3-digit ASCII code.

Create or update SD.MAP with any text editor. Each line has two 3-digit ASCII codes. They represent a mapping from the first character (what SD "sees") to the second (what you expected to see). This is a low-level process, and no assumptions are made about upper or lower case letters. Therefore, you should map both versions of any letter.

Example - In the SD.MAP file, to exchange A and Q.

113 097	(q a)
081 065	(Q A)
097 113	(a q)
065 081	(A Q)

NOTE: Character mapping applies to logging, but not to the fields on SD's opening screens.

When a district multiplier file (.MLT) contains non-English characters, you may have to use the CODEPAGE command to see them displayed correctly. For Norwegian characters, set your code page to 865, and ensure you have selected a TrueType font - see Starting SD on Page 4.

SKEDS and REMINDERS.

SD lets you record any event for which you would like a reminder, and you can also record notes or memos for reference after the contest. Use F7, or enter SKED or MEMO to create skeds, reminders and memos. This writes a timed record to NAME.MMO, where NAME is the name of your contest file.

The difference between a sked (or reminder) and a memo is that skeds include a time. For a memo, leave the time blank.

SD tracks your skeds and reminders and displays a one-minute warning before the due time, and also during the relevant 60-second period unless another sked is due. F8 displays the next 7 scheduled events in a table that replaces the Score window. Minus returns you to the Score window.

Minus can also be used to abandon data entry for a Sked.

You can use Skeds as a reminder to do backups (with DUMP or BACKUP), or to check for band openings, or change operators, or fill the generator – anything you want! There's no need to include the time with such comments. If you do enter a time, SD assumes you're recording a sked or reminder.

BAND MAP.

When you log a QSO, or use Minus to delete a callsign or wipe a QSO, the callsign is recorded in the band map.

There is usually no need to display this table directly, but F10 does it if required. Scroll through the table with Up Arrow and Down Arrow. To retrieve a highlighted entry (and set your radio to that frequency and mode), press Enter (or F10). Delete or Backspace will delete a highlighted entry. Any other key will return to normal logging.

The Band Map saves time in identifying stations already worked or flagged as you tune up and down the bands.

With rig control enabled, calls appear when you tune close to (within the threshold) the recorded QSO frequencies. The default threshold is 300 Hz, and may be changed with the THRESHOLD command.

Calls already worked are shown in lower case. Calls not worked (ones that you deleted from the logging line with Minus) are highlighted.

When you log successive QSOs on the same frequency (while running), only the most recent call logged on that frequency is shown when you next tune across the frequency.

The band map feature is particularly useful in shorter contests, where many stations occupy a fixed "run" frequency for most of the time – you know their "worked" or "not worked" status without having to wait for them to identify.

To retrieve the most recently stored entry, press F10 twice. With rig control, and after a QSY by entering the new frequency, this returns your radio to your original frequency (and mode) – very handy after moving a multiplier station to another band.

MULTIPLIERS.

There are two basic types of multiplier in HF contests. The first type is indicated by the exchange, for example, district codes such as zone, state, county or district. For these, SD uses .MLT reference files. For example, the multiplier file for RSGB contests is RSGB.MLT – a list of the standard UK district codes and names. The second multiplier type is derived from the callsign, and it may represent a country, a zone, a district within the country, or a prefix. These are "country" multipliers**.** SD's country multiplier files have the .CTY extension. The country multiplier file for most ARRL contests is DXCC.CTY, and for RSGB contests it is RSGB.CTY.

Some contests have both country and district multipliers. In CQWW, SD is the only contest logger to alert you to potential country and zone multipliers, in real-time as you type callsign prefixes, with no need to leave the callsign field or touch another key.

In contests with district multipliers, the multiplier window appears in the top right of the screen. As you log QSOs, this window shows the relevant districts worked and needed on the current band. You can quickly check multipliers for other bands by using F1 and F2 (with Caps Lock off) to go up and down the bands. Multipliers needed remain in bold type, whereas those worked are dimmed and appear in lower-case. As QSOs are logged, callsign or exchange elements that represent mults are highlighted.

The layout of .MLT files is shown in the Questions and Answers section of this manual.

There are 9 fields in each record of the country multiplier files (.CTY) – each separated by a colon and with semicolon after the last field. Spacing between fields is not critical, but you must not omit any colons or the final semicolon. I've kept the fields aligned vertically because it looks better. You can edit the files with text editors such as Notepad. Do not use "Word" or other word processors.

Field 1 Text description
Field 2 CQ Zone
Field 3 ITU Zone
Field 4 Continent
Field 5 Latitude
Field 6 Longitude
Field 7 Time difference
Field 8 Standard prefix.
Field 9 Standard and alternative prefixes and calls.
Field 10 Island References – IOTA Contest only.

NAVIGATE THE LOG.

To see earlier log entries, use the following keys in the Callsign field (which should be empty).

Up Arrow	Back 1 QSO.
Down Arrow	Forward 1 QSO.

To see all QSOs for a particular callsign - type the callsign and press F9. Use this to find the QSO number or the serial corresponding to a specific QSO, in the event that you want to edit the QSO – enter the QSO number in the callsign field. If you press F9 when the Callsign field is empty, you'll get the information for the most recent QSO (or Edit).

EDITING PREVIOUSLY LOGGED QSOs.

SD lets you edit **any** QSO in real-time. There are two simple methods for getting to the one you want. The first is to use Up-Arrow or Down-Arrow.

As an alternative, you can go directly to a QSO by typing its number in the Callsign field followed by Enter. To find this number, type the callsign followed by F9. Use Esc to clear the call. Note that if you enter a number in the Callsign field followed by TAB, SD assumes you've entered a partial callsign and takes you to the next field (usually RST).

To move between fields, while editing, use TAB or Right Arrow. With Up and Down Arrow, any changes are logged to disk, and you are taken to corresponding fields in other

QSOs. If you change your mind, or get into trouble, you can abandon an Edit with Minus.

SD's editing facilities set it apart from all other contest loggers – intelligent, real-time, full-screen editing on any QSO in your ASCII log.

When you edit a callsign, SD examines all QSOs for dupes and multipliers to be marked or unset, and instantly updates all relevant QSOs, and your score. In addition, the state, zone or district on the edited QSO will be reflected in all other QSOs with the callsign concerned. With the single exception of prefix multipliers, you can edit any combination of fields and everything will be kept consistent, with all dupes, multipliers, and points correctly recorded. Do this on SD, then try the same thing with any other contest logger and see the difference for yourself.

Remember that edits take priority over previous log entries. You can change the state/zone/district for all QSOs with a specific station merely by editing any one such QSO. The software prevents inconsistencies in your log, but may not stop you from doing something wrong!

If you log a QSO in error, ZAP deletes it – so long as you have not logged any subsequent QSOs. You can ZAP repeatedly to delete every QSO in your log, if necessary.

Once again, to delete individual earlier QSOs simply add /Z to the callsign. This marks them for deletion – they will disappear when you re-start SD, and your score will be recalculated.

If, for any reason, you log a QSO but want it to be ignored for duping or scoring purposes, add the /X suffix. SDCHECK will include the QSO in your Cabrillo log, but with the tag X-QSO: rather than QSO:

VOICE KEYER.

If your rig has an internal DVR (Digital Voice Recorder) supporting external control, SD's DVR command lets you use it directly – this is an integral component of rig control using the corresponding .SD rig-control file. The options are similar to SD's CW keyer. With Caps Lock ON, press F1 to play your CQ recording. With Num Lock Off, you can use the numeric keypad to play messages. With DVR playback enabled, Esc instantly stops playback. The CQTIMER or CQT commands repeat the F1 (CQ) recordings at intervals up to 10 seconds. Set CQT to 0 to disable repeats.
In the absence of an internal DVR, SD plays .WAV files, if present, located in your SD folder (F1.WAV, F2.WAV etc.) WAV sound files may be created with any Windows audio utility program.

Suggested voice recordings are:

F1 – your CQ call
F2 – your callsign
F3 – Thanks + your callsign

ESM – Enter Sends Message – SSB:

When running, it's convenient to have your CQ and exchange voice messages (F1 and F3) play automatically when you press Enter. Apostrophe toggles ESM. You'll know it's ON when "SSB", in the status line below the callsign field, is bright. In RUN mode, Enter, with no callsign, plays F1. When you have typed or accepted the received exchange, Enter plays F3 and logs the QSO. In S&P mode, Enter, with or without a callsign, plays F2. When in the empty exchange field, Enter again plays F2. Note that if there's anything in the exchange field, whether pre-filled or typed, Enter, in the exchange field, logs the QSO.

With your rig's digital voice recorder enabled (if present) with the DVR command, SD triggers playback directly from your rig. Otherwise it plays .WAV files in your SD folder. If you try to play a non-existent or corrupt WAV file, you'll get a Windows beep (error). To stop playback, play an "empty" WAV file. The file must exist, otherwise you'll hear a beep. To stop DVR playback, use Esc.

PTT is enabled and disabled with PTTON and PTTOFF. It works in exactly the same way for both CW and SSB, and uses the same serial port. On SSB, when PTT is enabled, you cannot abort voice keyer messages.

Use the STATUS command to see the status of PTT and other comms parameters.

When you use apostrophe to enable ESM, PTT is enabled, and remains enabled even when you toggle ESM Off.

CHANGE BAND or MODE on LOGGED QSOs.

To change the band or mode on a QSO, move to it, as for an Edit, and then use F1 or F2 (Caps Lock must be Off) to change band – or F3 to change the mode.

With the exception of prefix multipliers, SD checks your complete log for consistency and instantly updates any relevant QSOs and displays the correct multipliers and score on both the old band and the new band.

QSO RATE METER.

This window gives the QSO rate per hour for your last 10 QSOs, last 100 QSOs, and overall rate since the time of your first QSO. The values are updated every 5 seconds – just to keep you on your toes!

With fewer than 10 or 100 QSOs, the figures relate to the actual number of QSOs completed. They are accurate only when real-time logging is selected for all QSOs. To see your previous rates at any stage of the contest, use the arrow keys to navigate through the log – it's a good way to find if you've broken any personal records for your Last-10 or Last-100 QSOs,

SD does not calculate off-times, and rates may not be accurate when they span off-times.

Points/QSO value is shown for all contests with variable points, whether by band, mode or location.

CALL HISTORY FILES.

The LOAD command allows you to load Call History files with the extension .LST. These files are typically membership lists showing callsign, name and membership number, and the information will be displayed whenever you enter a corresponding call.

You can use them (with the LOAD command) for lookup either by callsign or by membership number.

For example, with -

```
EI5DI Paul 1905
1905 Paul EI5DI
```

If you type EI5DI, "Paul 1905" is displayed and if you type 1905, "Paul EI5DI" is displayed.

However, in the second case, if you then press Enter, the callsign is extracted and placed in the callsign field. For this to work, the callsign must be the last or only field in the record – apart from the membership number. This feature is particularly useful in the FOC and CWops events.

Use a text editor to create your own reference file. Each record may have up to 12 characters in the callsign and up to 20 characters of other data. There must be at least one space between the end of the callsign and the data.

For IOTA, it's useful to add island references to your .LST records. On a callsign match, the references are extracted and pre-filled. Use the lists of DXpedition callsigns and island references published before each contest.

Three Call History (.LST) files are distributed with SD, and automatically loaded, as appropriate.

CWOPS.LST – CW Open and CWOps Mini Tests.
FOC.LST – FOC Marathon and FOC QSO Party.
RDA.LST – RDA Contest.

The UNLOAD command clears all callsign reference data already loaded, and the SD_LOAD parameter in SD.INI.

LEAVING SD.

To leave the program, type END or QUIT in the Callsign field. If you're using SD in post-contest mode, END and QUIT may be entered in the Time field.

What happens if the power to the computer fails? SD updates your log on disk immediately after logging or editing each QSO. When power is restored, simply restart SD, go to the QSO entry screen and you'll see the last QSO logged immediately above the logging line.

BACKUPS.

All QSOs and edits are written to a separate audit (.AUD) file in the same format as the .ALL file. The audit file is opened in append mode, which means that new or edited records are always written to the end of the file. As a result, the .AUD files serve as very reliable backups, and as references from which your log (the .ALL file) may be recreated if necessary.

To backup your log, use the DUMP or BACKUP commands. Your log (.ALL and audit .AUD) files are copied to any device you choose. In each case, the last letter of the file extension is changed to B (for backup).

COLOURS.

The COLOUR (or COLOR) command lets you change individual default colours.

1. SD's windows background – default 1, blue.
2. Logged QSOs – default 7, dim white.
3. Logging Line – default 15, white.
4. Windows Titles – default 0, black
5. Desktop – default 3.
6. Dupes – default 0, black.
7. Worked (Check Partial Window) – 7, dim white.
8. Callsign match with SCP entry – 14, yellow.
9. Multipliers – 11, bright blue

The RESET command restores the default colours, and aligns SD's window with the top left-hand corner of your screen.

When logging calls, SD uses colour to indicate the status of the QSO so that, generally, there's no need to look away from the logging line.

The default colour when logging calls is "QSO Colour" - white. A dupe, or other zero-pointer, will change to the "Dupe Colour" - black. If the call would be a country or prefix multiplier, its colour changes to the "Multiplier Colour" - light blue.

If the call has been worked on another band, there is no change in colour but you get a band analysis under the logging line - bands not needed are shown in black. Otherwise (call not logged before and not a dupe or mult), if there is a match with any call in the SCP window, the call changes to "SCP Colour" - light green. If you don't like this, or think it's too fussy or confusing, change SCP colour to the same value as QSO Colour.

Some colour combinations look really bad. If you get in a muddle with them, use the RESET command and try the default colours for a while before changing individual ones as preferred. Please refer also to "Colour Tab" on Page 4.

IOTA CONTEST.

SD uses SDIOTA.CTY to identify countries from callsign prefixes and to list corresponding IOTA references. IOTA references with lower-case continent abbreviations, for example, **eu115** (mainland Ireland) is the default IOTA reference for the EI prefix. If the continent (eu) is in upper-case, no default value will appear. You're free to edit these as you prefer.
To check the multiplier status of a specific island on the current band and mode, type its reference in the callsign field - redundant zeros are not required. For example, type **EU1** - if it's a multiplier, "M" appears above, and your multiplier status for EU001 (Dodecanese) on all bands and both modes, appears below. No other contest logger does this. Add 2 to see your status for Shetlands EU012, and add 3 for Scottish Coastal Islands EU123.

Multiplier slots are highlighted. Use Esc or Minus to clear the IOTA reference and multiplier analysis.

SD is unique in displaying all possible island references, if any, as calls and prefixes are typed. For example, G, on its own, instantly shows all possible IOTA references for England, together with their multiplier status on the current band and mode. Add M to see the equivalent for Scotland.

AFTER THE CONTEST - SDCHECK

Use SDCHECK, after the contest, to generate your log. It has the following options. Options 4, 5 and 6 are legacies from the days of paper logs – they work, but are not supported.

1. **Create your Cabrillo .LOG file** - to be uploaded or emailed.
2. **Export Log as ADIF**. Exports your log in Amateur Data Interchange Format for integration with your station log.
3 **Export Log as Text**. An alternative to ADIF, it's in CSV format with # as the delimiter, and can be

imported directly into Excel, or Access and other databases.

Update CQWW.CTY and DXCC.CTY:
To update SD's country files DXCC.CTY and CQWW.CTY, go to http://www.country-files.com. Select CT under the "Contest" Tab. Save CTY.DAT to your C:\SD folder to replace any existing CTY.DAT.

Run SDCHECK (for any contest log - it doesn't matter) Select Option 8 - Update DXCC.CTY and CQWW.CTY. Wait for SDCHECK to finish, then quit when you see the "Success" message.

While creating a Cabrillo log, you input the header information one line at a time – with default options taken from your responses for your previous Cabrillo log, stored in SD.INI. You can move around the data fields with Up and Down Arrow.

If you use a general-purpose logger you can import ADIF logs from SDCHECK and then generate QSL labels. ADIF is Amateur Data Interchange Format.

INITIALISATION FILE – SD.INI

All your selected parameters, including the messages in the memory keyer, are recorded in SD.INI. Whenever you start SD, the appropriate parameters are applied.

If the .INI file is not present, it will be re-created the next time you run SD.

Here's a brief explanation of the parameters.

MSG1 to MSG8	Keyer memories, 1 to 8
CONTEST	Most recent log name (.ALL file)
TEMPLATE	Most recent template used
VERSION	The version of SD used
POSTSCORE	Not used
COUNT	Not used
CWSSB	Most recent mode
BAND	Band last used, 1=10m, 6=160m
CALL	Your Callsign.
NAME	Your Name.
ADD1-5	Your address – lines 1 to 5
EMAIL	Your email address.
CLUB	Your club
LCTR	Your 4 or 6-character locator
CODEPAGE	Most recent code page.
CQZONE	Your CQ Zone.
ITUZONE	Your ITU Zone.
WPM	Keyer speed - WPM
WEIGHT	Keyer weight, default 50%
CALWIN	Your PC's CW calibration factor
KEYPORT	CW port - 0 if unused
CWDTR	Set to 1 when DTR is enabled
CWRTS	Set to 1 when RTS is enabled
WINKEY	1 = WinKey, 0 = internal keyer
WKBIT0 - 7	WinKey – internal control bits. See the WinKey manual for more info.
WKCOMP	WinKey – all dots/dashes compensation.
WKEXTN	WinKey – first-character extension.
WKRATIO	WinKey – dot/dash ratio – default 50
WKDOTMEM	WinKey – 1 when enabled
WKFARNS	WinKey – Farnsworth WPM
MINWPM	WinKey – minimum WPM
WPMRANGE	WinKey – WPM range
POTRANGE	WinKey – 127 or 255
PTTON	1 when enabled
PTTLEAD	Lead time (ms), before keying
PTTTAIL	WinKey – PTT tail time (ms)
BMTIME	Not used
BMTHRESH	Not used
RIGPORT	Rig-control port – 0 when disabled
RIGDTR	1 when DTR is enabled
RIGRTS	1 when RTS is enabled
RADIO	Radio Name – parameters in RADIO.SD
CWREV	1 for reverse CW sideband
VOICE	1 to enable rig's voice keyer
AUTOFILL	0 to inhibit pre-fill, otherwise 1
EXPAND	1 to enable SD's expanded screen
STEPFREQ	Not used.
DATABITS	Serial Comms – default is 8
STOPBITS	Serial Comms – default is 2
PARITY	Serial Comms – default is N (None)
TIMER	Countdown timer (0-10) between allowable band/mode changes.
TIMERTYP	B - Band, M - Mode, BM - Band/Mode
BEEPDUPE	1 for audible warning of dupes
SAMERST	If 1, sets previous RST Sent as default
SHOWRATE	0 to suppress Rate Window display
FORCENUM	1 to force numerals from top row, regardless of state of Shift or Caps Lock
PRIORITY	SD's runtime priority – normally 0.
BPS	BPS – default is 4800
SCP	Super Check Partial – using .DTA files Toggled with the SCP command
MODE	Mode last used. 0=CW, 1=SSB
AUTOINS	1 – Auto Insert mode enabled.
LOGENTER	Log on Enter – default is N (Off)
RSTS	RST Sent always 59(9) – default is Y
VRSTS	Not used.
QTCCHAR	Defines QTC field terminator
BEEP	Not used
AUDIT	Additional audit to .TXT file.
QRS	% CW speed reduction with semicolon
SIDETONE	1 to enable WinKey sidetone
CWSTART	Defines callsign start character for F2 exchange message – with ESM enabled.
RUNRANGE	Frequency limit for auto toggle to S&P.
CWZERO	5 characters = 019N0 1 – Character for non-leading zeros. 2 – Character for 1 (in serials) 3 – Character for 9 (in serials) 4 – Omit leading zeros. Y/N 5 – Serial Padding Factor 0 –5.
DISTUNIT	K=kilometres, M=miles
CONT	Your continent
LEFTCTRL	1 when DTR is enabled
CBAND	Last Band Entry Category
CMODE	Last Band Mode Category
LOAD	Name of .LST names database loaded at startup. Blank if None.
WINCLR	Window background colour.
DESKCLR	Desktop colour
LOGCLR	Logged QSOs colour
QSOCLR	Logging colour
TTLCLR	Window Titles colour
DUPELCLR	Dupe and Zero-Point QSO colour
WORKEDCLR	QSOs Worked colour
MULTCLR	Mults colour
SCPCLR	Colour for SCP match

PROGRAM and REFERENCE FILES

SDCHECK.EXE	Post-contest program.
***.CTY**	Reference files for identifying country and continent from callsign prefixes.
***.MLT**	District multiplier reference files.
***.SD**	Rig control files.
SD.INI	Preset keyer messages and user preferences. Created by running SD.
HELP.TXT	HELP file – you can edit this yourself.
***.TPL**	Templates for individual contests.
TEMPLATE.TXT	The template index file.
HISTORY.DOC	History of updates and bug fixes.

EDITING THE .ALL FILE.

Your SD log is a plain text (ASCII) file – it looks similar to a Cabrillo log, and has a **.**ALL extension, for example NAME.ALL – where NAME is the name you gave to your contest log. You can edit the QSO records with any text editor (NotePad is a good option, but word processors are **not** recommended). Do not edit the control records - the ones before the QSO records. Make sure to keep all QSO columns aligned vertically.

Take a copy of your contest log **before** editing.

TEMPLATE FILES.

Template files hold parameters and scoring information for each contest. They begin with "Q" and have a .TPL suffix, and are referenced from the TEMPLATE.TXT file – with one record for each contest, giving the name of the event and the corresponding template file.

The range of template parameters is continuously being extended to support more contest types. You are free to experiment with your own templates. In general, you should experiment only with those with Type 4, 9 or 10 as the first parameter. However, there's nothing to stop you editing any template and observing the results.

When you start a new contest, SD displays the contents of TEMPLATE.TXT for you to choose a template.

TEMPLATE PARAMETERS.

Here is a summary of the parameters. They may appear in any order, with the sole exception of the TYPE parameter which must be first. You should not experiment with templates other than Type 4, 9, 10 and 11.

OPTION: Associated with certain contest types – **should not be edited**.

BONUSPOINTS: Has a value of 0 when normal multipliers apply, otherwise it defines the score for each bonus QSO.

CTYFILE: This file (.CTY) identifies country multipliers.

DUPETIME: Indicates the number of minutes after which contacts with the same station/band/mode will not be flagged as dupes. Used in the LZ Open and Dnieper Cup contests.

LOGSERIAL: Y means Serial Received is logged.

LST_FILE: Name of additional Call History file.

MAXBAND: Highest band allowed – 160 is "high".

MINBAND: Lowest band allowed, where 10 is "low".

MIXED: Y if mixed-mode operation is permitted.

MLTFILE: The file (.MLT) used to identify district multipliers.

MODE: Sets the mode in single-mode events.

MULTSBOTH: Y if multipliers count separately on both mode (in mixed-mode contests).

MULTSCOUNT: B, by Band – O, once only.

NON-AREA MULTS: Y when other countries, the ones that don't send a district or area code, count as multipliers.

NORST: Y when no reports are exchanged.

POINTS: Fixed value of points for each QSO, regardless of mode, band or location.

POINTSAREA: The value of points for all QSOs with stations giving an area code as part of the exchange (SD Contest Type 10). When set to 0, points are assigned in the same way as QSOs with other stations - the ones not giving an area code.

POINTSCW: QSO points for CW QSOs with own country, own continent and other continent – all bands from 10m to 160m.

POINTSSSB: As above, but for SSB QSOs.

REPLACE_RST: For events (with no RST) in which a district code, or anything else, is entered before a serial. In effect, the district code replaces RST.

SCOREMULTS: Applies only to contests where serials (only) are exchanged and mults do not apply. The only valid value is "N".

SENDFIXED: Y when a fixed element is sent as part of the exchange in every QSO.

FIXEDTEXT: The corresponding (to SENDFIXED) on-screen prompt.

FIXEDSIZE: The maximum size of the FIXEDTEXT field.

FIXEDLOCN: The screen position (column number) for the start of the SENDFIXED data.

LEAVEBLANK: Y if the SENDFIXED field may be left blank..

SCP_FILE: Name of alternative SCP file.

SENDSERIAL: Y means you send serials in this contest.

SINGLEBAND: 10m, 15m etc.

SPECIALCALL: 99 (Score for QSOs with this call)

TIMES: Indicates the number of times each multiplier or bonus (country or district) counts. When not specified, the default is 1. In the template file for the Commonwealth Contest, TIMES is set to three - the first three QSOs with each Commonwealth area count as bonuses.

TRUESERIAL: Y means that cut numbers (letters) will be converted to numbers

TYPE: SD uses Contest Types 1 to 12 – these are for internal use and should not be edited.

WORKBOTH: When Y, it's OK to work the same station on both modes (by band) without the second QSO counting as a dupe.

QSOPARTY: When Y, callsigns ending in /M or /R are not dupe-checked.

FAQs.

Q. I've got some QSOs in the .ALL file that I want to delete. What do I do?

A. Use the ZAP command to delete the most recently logged QSO, but not earlier ones. Delete earlierl QSOs in the log by adding /ZAP (or just /Z) to the callsign – they will disappear the next time you load that contest log.

Q. What should I do if the program stops with some strange error message?

A. Assuming there is room on your disk, try reloading your contest file. If you have time to examine the .ALL file, check with NotePad that it appears to be formatted correctly. If any record appears to be corrupt, copy it from the corresponding .AUD file.

For contests controlled by templates with TYPE=4 or TYPE=10 parameters, district codes are held in separate text files corresponding to each contest type. You can edit the multiplier files, using a text editor, to reflect any necessary changes in existing contests and, more significantly, you can set up new files and templates to cater for other contests. All you have to do is to use the same format as in the existing **MLT** files.

This is a 1 to 5-character multiplier identifier (always the same length for a particular contest, and trailing spaces are allowed), followed by an equals "=" sign. You have the option of adding a description of the multiplier after the equals sign.

CONTESTS SUPPORTED.

Templates are supplied for more than 290 contest options. If you would support for another contest, please send me a link to the rules.

WAE Contest.

The QTC command lets you log QTCs (if you're in EU), or send QTCs (if you're outside EU).

For sending QTCs, use the QTCCHAR command to define your choice for the Enter, Tab, or Space key to send the data in CW – Enter is the default option. To move from one QTC to another, use the Up and Down Arrow keys. You can repeat any QTC when it is highlighted. When finished, use Down Arrow on the last QTC – then confirm the callsign and QTC sequence.

SCORE WINDOW.

In single-mode contests, totals for QSOs, Dupes and Mults are shown by band.

For mixed-mode contests, Backspace or Delete in an empty Callsign field shows QSO totals by band and mode. When mults count separately by mode, a further Backspace or Delete shows Mult totals by band and mode.

CW DEMOS - IMPRESS YOUR FRIENDS.

The DEMO command is useful when you want to prove to anyone, or an audience, that Morse Code really does work. WinKey must be connected and enabled. Ask a volunteer to type a question – followed by Enter. The corresponding CW is then sent at the default speed, and you can impress the audience with your answer.

LINUX.

SD runs seamlessly under wine/wineconsole. However, use the UNIX command (once only) to ensure a stable screen display. This sets SD_UNIX to 1 in SD.INI. For normal Windows PCs, this parameter must be 0.

THIS IS THE SMALL PRINT.

SD is provided "as is". You use it at your own risk. It is not warranted to be bug-free. EI5DI reserves the right to add modify or discontinue program features without notice or obligation.

Please use the SD-User mailing list to get help, to keep informed about updates and bug fixes, and for information about using SD in upcoming contests.
http://lists.contesting.com/mailman/listinfo/SD-User

Again, if you need help, or have suggestions or questions, do not email me directly. Send your query or comments to the mailing list sd-user@contesting.com

Known Bugs.

In CQWW and IARU HF, no zone checking is done following callsign edits. When you edit a callsign, it's your responsibility to edit the zone if necessary.

SD scores /AM and /MM callsigns according to the home callsign. This is not correct for all contests.

SD Feature Summary - "Commands" are entered in the Callsign field on the logging screen

LOGGING

Enter	Accepts a completed field. **Space** is an alternative (not recommended)
TAB	Accepts a partial or completed field. **tab delays logging.**
Esc	Wipes a single field. A second **Esc** will restore it.
Minus	Wipes a QSO (all fields) - adds data to the Band Map**.**
F11	Wipes a QSO - no Band Map update.
F12	Enter, without any ESM message.
Home or **[**	(In a field) Move to start of the field.
End or **]**	(In a field) Move to end of the field.
Home	Back 50 QSOs – in Edit mode.
End	Forward 50 QSOs – in Edit mode.
Serials	No serial received - enter 0

BAND MAP

F10	Display Band Map
Up/Down Arrow	Select entry
Enter or **F10**	Retrieve entry - Call, Freq, Mode (removes entry from QM table)
Del or **Backspace**	Delete highlighted entry
Esc	Return to logging.

WHEN WARNED OF A DUPE

To log it	Complete the exchange.
else	Press Minus to wipe the QSO.

SEARCHING & POUNCING

Full Stop	Partial call search by suffix.
F9	List QSOs by Call
SCP	Toggle Super Check Partial
F12 or =	Enable SCP for current QSO only.

CHECK PARTIAL WINDOW

Up Arrow	Move to window
Arrow Keys	Move around the window
Enter	Retrieve callsign
Esc	Return to logging.

EDITING PREVIOUSLY LOGGED QSOs

Use **Up/Down** keys or enter **QSO number.**
Callsign + **F9** gives QSO numbers
Use **TAB** between fields. **ENTER** when complete.

F1	Edit **Band** HF. (Caps Lock off)
F2	Edit **Band** LF. (Caps Lock off)
F3	Edit **Mode**. (Caps Lock off)
Minus	Abandon Edit - leaves QSO unchanged.

SKEDS, MEMOS and REMINDERS (Caps Lock off)

F7	Record them.
F8	Display them.

KEYER

Ctrl or **Alt-K**	Toggle **Keyboard/Logging** mode.
Page Up/Down	Increase/Reduce speed
Left/Right Arrow	Reduce/Increase Weight
Home	Restore 50% weight
; (semicolon)	Toggle 20% speed change (QRS)
Alt-M or Apostrophe	Toggle ESM.
Alt-R or Grave Accent	Toggle RUN/S&P in ESM

Memory Playback: (Esc or minus to abandon)

F1 to **F8**	With Caps Lock ON **^**
1 to **8**	On Numeric keypad (Num Lock OFF)

Edit Keyer Memories: Shift-F1 to **Shift-F8**

Mode - Run: F1-F4 Search & Pounce: F5-F6

F1 TEST #R #R TEST **F5** #R
F2 #C #T #S#E **F6** #T #S#E
F3 TU #R#E **F7** #T #P
F4 #C #T #S#E (dupe message) **F8** ?

#R OwnCall **#C** Callsign logged
#T RST Sent **#S** Current serial
#P Previous serial. **#N** Name from .LST file
#E Simulates Enter **#B** Simulates Space Bar
< Increase WPM by 2 **>** Reduce WPM by 2
#1(to 9) increase speed **#-1**(to -9) **R**educe speed
#0 Reset speed to normal
^ Insert one half-dot space

MULTIPLIER ENQUIRIES (Caps Lock OFF)

F1/F2	District Mults - next band HF/LF
F3	District Mults - all bands.
F4	Countries worked/wanted by Continent.
F5	Countries worked/wanted by Band.
F6	Single country status by Band.

COMMANDS (In the Callsign field while logging)

1B - 2B, etc	List calls logged on 1 – 6 bands.
AB	List calls logged on any band.
AI	Toggle Auto Insert entry mode.
B10, **B15** etc	Change Band - 10m, 15m etc. or enter kHz directly.
BEEP	Toggles Beep on Dupe.
BPS	Set BPS rate.
CALIBRATE	Calibrate internal CW speed.
COLOUR	Change screen colours.
CQTIMER / CQT	Set time between repeat CQs.
CLEAR or **CLS**	Resets Screen Formatting.
CODEPAGE	Defines the default code page.
CONFIG	Configure CW & rig-control ports
CQT	Set CQ repeat time.
CW **S**SB	Change Mode.
CWREVERSE	Toggle the rig's CW "sideband".
CWSTART	Set position for auto-start in ESM.
CWZERO	Set CW parameters.
D(UMP)	Backup log.
DVR	Enable DVR message playback.
END or **QUIT**	Leave the program.
EXPAND	Toggles expanded desktop for SCP.
F11 - F12	Change Bands – Up and Down.
FILL / NOFILL	Enables/ Disables exchange pre-fill
FORCENUM	Forces numbers from top-row keys.
HELP	Displays Help Window - HELP.TXT
LINK	Toggle rig comms link on/off.
LOAD / UNLOAD	Load/Unload Call History (LST) files.
LOGONENTER	Toggle Log on Enter.
MEMO	Enter memo - same as **F7**.
MEMORY	Toggles WinKey Dot/Dash memory.
NOFILL	Suppresses prefill – needed with ESM
OFF/POST	Post-contest logging.
ON/REAL	Real-time logging.
PORTS	Configure CW & rig-control ports
Quotes - "	Repeat previous callsign.
QTC	Log or Send QTCs in WAE .
RANDOM	Selectable 3 or 4-digit random serials.
RESET	Sets screen colours to default values.
SERIAL	Resets Serial Sent.
SETDUPE	Resets dupe and mult checking.
SHOW	Shows internal codes for keyboard characters – a diagnostic tool.
SHOWTIME	Toggles Operating Time display.
SIDETONE	Toggles sidetone (WinKey only).
SKED	Set up a sked - same as **F7**.
SPEED	Set WinKey's speed control via keyboard or WinKey's pot.
STATUS	Display **SD.INI** parameters.
SUPER or **SCP**	Toggle Super Check Partial.
TESTRIG or **TR**	Manual rig-control commands.
UNIX	Use this once, if running Linux.
X	Swap sideband – CW or SSB.
ZAP	Delete the last QSO in your log.